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**Grant's Final Campaign:
Intelligence and Communications Support**

**A Monograph
by
Lieutenant Colonel Ben L. Elley
Military Intelligence**



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ABSTRACT

GRANT'S FINAL CAMPAIGN: INTELLIGENCE AND COMMUNICATIONS SUPPORT by Lieutenant Colonel Ben L. Elley, USA, 47 pages.

This monograph reviews Ulysses S. Grant's approach to conducting the final campaign to end the Civil War. Grant's assumption of command of all Union Armies in March 1864 marked the beginning of this campaign. This date sets the stage for documenting what type of intelligence structure existed and how communication supported the transmittal of intelligence to make this campaign a success.

The monograph first examines Grant's early military background to determine how his past may have shaped his views and impacted on his use of intelligence. Next, the type of intelligence organization that existed in the Civil War is established along with a discussion of the role of the "signal corps" in the collection and transmission of intelligence. Finally, the methodology used to collect, analyze, and transmit intelligence by Grant is reviewed through a brief look at the final campaign beginning with the Battle of the Wilderness through the surrender of the Confederate Army. A conclusion centering on lessons learned of significance to today's military is offered.

The Union Army lacked a national level intelligence organization to direct the collection, analysis, and dissemination of intelligence. This shortfall was overcome through the efforts of Grant, his staff and commanders, and the use of the "signal corps." The signal corps provided the telegraph as a tool for transmitting intelligence and also became the focal point for much of the analysis and direction for the intelligence collection effort. Lastly, Grant's understanding of the need for intelligence in operational planning set the stage for insuring the connectivity between battle commanders and intelligence analysts in directing the collection, analysis, and dissemination of intelligence. This connectivity is essential for the planning and waging of successful campaigns.

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SECTION I

INTRODUCTION

One hundred and thirty-seven years ago the American Civil War ended, yet accounts of this war are still being written by countless historians, military strategists, and authors. Why? Because lessons learned from that war still apply today.

A review of historical records and numerous writings on the Civil War reveals varied accounts of how intelligence then was collected, analyzed, transmitted, and used in operational decision making. Intelligence organizations did not exist in the modern day sense nor were there any prescribed methods for collection or transmission of information -- at least not at the start of the war. New technology and innovative thought, however, solved many of the problems associated with intelligence collection, analysis, transmission, and use.

The basis for this paper came from the curiosity of James M. Dubik in his own research of Ulysses S. Grant and his quest to determine how Grant planned his strategy in defeating Robert E. Lee and the Confederate Army. Dubik's paper, Grant's Final Campaign: A Study Of Operational Art, makes the assertion that Grant "...designed and executed a campaign to defeat the South

completely." (1) However, he did not design or execute this plan without knowing something about the enemy. This paper is designed to answer how Grant collected and analyzed intelligence and used signal assets in support of his intelligence collection and dissemination efforts. The review will focus primarily at the operational level of war from the time Grant was appointed a Lieutenant General in March 1864, and was assigned as the General-in-Chief of the Union Army.

The framework for this review will take several paths. I will review Grant's early military life and experiences to determine if there was anything in his early life that shaped how he might use intelligence in conducting his campaign. Secondly, the monograph will establish what type of intelligence organization existed during the Civil War and how the "signal corps" was used in the collection and transmission of intelligence. Next, a review will be made of the methods for collection and analysis of intelligence to provide an assessment of the effectiveness of Grant's use of intelligence. Lastly, I will discuss the relevance of these findings to current or projected military operations.

GRANT'S MILITARY BACKGROUND

Ulysses Grant's early military experiences began with his attendance at the military academy at West Point. He was described as best at horsemanship and mathematics and not so keen on the finer points of soldiering -- like tactics, drill and ceremony, and neatness. Upon graduation he entered military service and served at Jefferson Barracks in Missouri until he received orders which eventually took him to the Mexican War. In battle he was described as ... "cool, swift, and unhurried..." which seemed to cast a mold for his performance during the Civil War. (2)

This demonstrated coolness in battle during the Mexican War was seen again years later when Grant was a commander of troops in the Civil War. Grant was a man of little outward emotion and preferred staff officers who also did their job quickly and without flare. Grant wanted his messengers to deliver their messages and information to him without fanfare or emotion -- as he felt reports would (or could) be exaggerated through too much emotion. (3)

Grant's views reinforced that of Carl von Clausewitz who expressed a similar view when dealing with intelligence. "As a general rule most men would rather believe bad news than good, and rather tend to

exaggerate the bad news." (4) This notation by Clausewitz was written at the turn of the eighteenth century based on events in previous wars. However, the application of this thought remained valid in the Civil War. Whether Grant read Clausewitz is unknown, but the similarity in their views on the exaggeration of bad news is noteworthy.

Grant was once described as having the ability to recall the topography on which he had operated. This uncanny ability provided him with the unique capability to think through operational issues. He was calm in the face of calamity, could extract fact from fiction, was quick to provide direction, and saw events for what they were. He would select the best course of action from many alternatives and was firm in conviction once he made up his mind. He analyzed tactical situations, but did not automatically implement actions just because he had been successful in a similar circumstance. He learned from his experiences and through them formed his own art of war. (5)

Grant knew military history and was familiar with the campaigns of Napoleon, Caesar, and the Thirty Years War. (6) This use of history gave him an ability to put a battle into focus. "His perception was not a single snapping of the shutter to give a brilliantly clear image of the battle stopped in full clarity. Instead

what he saw always included a dimension of time, an awareness of the unfolding evolving motion of the life of the war." (7)

Grant could look beyond the battle at hand to focus on events in the future. This same ability supported his own views on the "art of war" which he described as "...quite simple: find out where your enemy is, get at him soon as you can and strike him as hard as you can and keep moving on." (8)

Another factor which may have influenced Grant's views on intelligence came while he was Commander of the Army of the Tennessee. In April 1862, at the Battle of Shiloh Church, General Grant lacked intelligence on Confederate force activities. Consequently, the attack by approximately 40,000 rebel troops surprised him, and a fierce, costly battle resulted. Grant cited this incident as he prepared for his campaign to Vicksburg in September 1862, and vowed to structure his own organization for intelligence collection to preclude this type of incident from happening again. (9)

Grant's views on warfare and intelligence were shaped from these varied experiences. How these views would impact on his plan to end the war and the development of his own intelligence organization

were yet to come. Of importance were his abilities to plan ahead, his knowledge of previous campaigns in history, and the necessity to know where the enemy was at all times.

EARLY CIVIL WAR INTELLIGENCE

At the start of the war neither side had an intelligence organization. The experience level of personnel to run this type of activity was also lacking. These hindrances effected the war efforts on both sides of the battlefield. Many new approaches to intelligence collection would be tried before the war ended.

[N]either the union nor the confederacy had a formal intelligence apparatus in place - or any significant body of recorded experience to turn to for help...the civil war from beginning to end was a groping of self-education, more often marked by spectacular failure than by substantial successes. (10)

Edwin C. Fishel wrote in his article, The Mythology of Civil War Intelligence, that the word intelligence was nothing but another word for information at the start of the Civil War. The special meaning of information about an enemy or "intelligence service" simply did not exist. Fishel labeled these connotations as "myths" that have long been held as true. (11)

Civil War staffs lacked a section responsible for

intelligence activities. The use of a general staff organization focused on quartermaster duties and logistics, not intelligence. Victor M. Rosello Jr. described this shortfall as, "Generally speaking, because of limited intelligence capabilities and the deprivation of a national level intelligence organization that set the standards for intelligence staffs at army level and below, commanders fought relatively in the blind through the course of the war." (12) Rather, intelligence efforts were engaged at all levels, often at the direction of a general officer. No uniformity existed concerning where or how intelligence was collected. The result was nothing more than disorganization and a continued myth, promulgated by the writings of historians that some type of "secret service" existed at the national level to handle this intelligence activity. (13)

In 1861, Allan Pinkerton, the son of a Scottish police sergeant -- and himself a former Chicago police officer -- became the person most commonly referred to as the originator of a "secret service" for the Union Army. Pinkerton, a name synonymous with the much later formed United States Secret Service, uncovered a plot to assassinate the soon-to-be inaugurated President Lincoln. He later went on to become an employee of

General George B. McClellan, Commander of the Department of the Ohio. (14)

Pinkerton was used in the Washington area to identify breaches in security of the Union Army headquarters which were giving Confederate officials advance knowledge of Northern armies' deployments, dispositions, and subsequent actions. (15) Pinkerton had various degrees of success in this capacity. Through the use of untrained civilian sources he collected information on a variety of Confederate activities for McClellan. McClellan eventually became the Commander of the Army of the Potomac and used the information gained by Pinkerton and his sources to formulate estimates of rebel strengths. McClellan, who was very cautious in his estimates of enemy forces, saw the South as better prepared and capable than Union forces. This overestimation was the result of Pinkerton's exaggeration of what his field agents collected. Consequently, in November 1862, both McClellan and Pinkerton were removed from further service in an intelligence capacity. (16)

Colonel George H. Sharpe of the 120th New York Regiment assumed the role of the head spymaster and formed the Bureau of Military Information. (17) Until this time "...no proper...military intelligence agency

was ever organized and intelligence activities in general continued to suffer from inadequate coordination." With the formation of the Bureau of Military Information at general headquarters, a more formalized staff was assembled to provide advice and information to the commander-in-chief on enemy activities. (18)

The actions and effectiveness of the Bureau of Military Information for the Union Army and its commanders are largely unrecorded. This shortfall precludes any indepth assessment of how intelligence shaped the battlefield or to what extent the organization served the Union Army in winning the war. (19) However, Sharpe did continue to serve Grant. Upon taking command of the Union Army in March 1864, Grant appointed Sharpe to his staff to cversee intelligence activities. His performance further earned him a promotion to Brigadier General of Volunteers and assignment as the Assistant Provost Marshal of the Armies operating against Richmond in December 1864. (20)

With the presence of Sharpe and the beginning of some form of organization to the intelligence processes, a means of transmitting intelligence was essential. Even in this area there were improvements in technology which would improve the intelligence

effort on the battlefield.

SECTION II

INTELLIGENCE DISSEMINATION

Continued improvements in military communication's capabilities provided opportunities to collect and transmit information over great distances. Messages sent by signal flags or by telegraph went quickly and improved the slow method of dispatch by rider techniques. Now commanders could maintain contact with their subordinate, adjacent, and higher headquarters for the passage of information as well as command and control purposes. The laying of lines became routine with reels of wire strapped to the backs of mules on specially designed saddles which allowed the wire to unwind as the mule moved. Wagons carried the poles, operators and necessary instruments. For example, as a division headquarters established its camp, wire would be laid at the rear and parallel to the closest flank of the brigade. This became automatic in time and enabled the timely establishment of communications. (21)

As major units moved by day their headquarters were in touch with Grant by nightfall. Major Thomas T. Eckert, Assistant Superintendent for the Department of the Potomac Military Telegraph Department, wrote in a

letter on June 15, 1864, how Grant and Meade had been in contact with each other on a near continuous basis.

All corps head-quarters (sic) and many brigades have been in constant connection... during every engagement. Also, every reconnaissance that has been made in force has had telegraphic connection with headquarters. Last, but not least, connection has been kept while on the march. This was accomplished by making a halt at stated times (intervals of thirty minutes to one hour), reporting any change with the advance that might occur, or any change in orders from head-quarters (sic) to the advance or rear. (22)

This connectivity to his commanders and to the War Department gave Grant the means for,

...exercising strategic direction and administrative control over the largest and most complex military organization then in existence. Furthermore, the...advantage given by instantaneous transmission of military intelligence (emphasis added) was amplified by the employment of many...new mechanical devices... (23)

One of those new devices was the telegraph. It provided both the means for relaying and collecting intelligence. The operator, when not transmitting or receiving friendly information, would hook his instrument to Confederate lines in hope of receiving information on enemy movements. (24)

Grant received much of his information over the telegraph. Commanders in the field provided updates of enemy actions and their own which Grant used to make his decisions for future actions. However, not all communications were timely nor was the system

completely reliable. Grant's final report to the Secretary of War included mention of the difficulty of communications at a battle near Harper's Ferry in late July 1864. Telegraph wires between his headquarters and Washington were often down. Consequently, orders were issued on inaccurate information.

It took from twenty-four to thirty-six hours to get dispatches through and return answers back; so often orders would be given, and then information...received showing a different state of facts from those on which they were based, causing confusion and apparent contradictions or orders... (25)

The flow of information over the telegraph became key to Grant's successes, but how the information was collected and through what sources it would be developed became equally as important. The types of sources and methods used to collect this intelligence was of critical importance to his efforts.

ALL SOURCE INTELLIGENCE COLLECTION

Sources of intelligence during the Civil War were many and varied in sophistication. Spies, deserters, scouts, and even signal troops were sources of intelligence. When a unit moved, its signal troops traveled ahead and on the flank to secure high ground where they would report on friendly and enemy movements. Enemy signal flags observed were translated

and the information forwarded. This process was not always fast, but it did provide usable information. (26)

Two types of signal stations were used by the signal corps for either the collection of information or the transmission of messages. One, called an observation station, would observe the enemy or terrain for purposes of detecting enemy forces as they moved into an area. This type of station was invaluable to the intelligence efforts of the Union Army. A second station, named a station of communication, sent and received messages although either station performed both purposes if necessary. (27)

The observation station was of most use to the intelligence collection efforts of the Union Army. These stations were situated on the top of high hills, in tall trees, or in specially built towers. The stations allowed the signal officer to look for and determine enemy activity and possible intentions, map unknown terrain, and in general provide information for use in a variety of ways. (28)

This systematic process of observation did not develop by accident. Paragraph two of General Orders Number Nine, dated June 26, 1863, from the Office of the Signal Corps in Washington, specified the importance of the corps and its officers to the collection of information.

Under all circumstances must officers of this Corps be fully cognizant of the responsibility... as proper and reliable sources of information, or means of communication ...for the use of the commanding general, or other officers commanding troops, and often being the foundation of important movements or operations... (29)

Paragraph three of the order went further and detailed the types of information to be reported:

Reports must be made full and concise, detailing all important discoveries, such as movements of the enemy, direction taken, probable numbers, whether artillery, infantry, or cavalry, and their position taken by compass from the station of observation. (30)

Thus the signal corpsman filled the role of an intelligence source. The information collected at these signal sites was compiled for future analysis. Additionally, deserters and refugees wandered into these observation sites. These people often provided information on the unit they just left or activities observed in the course of their travels. Their information was not always time sensitive or current, but it did provide a basis for comparison with other information collected.

A circular and subsequent order from Headquarters, Military Division of West Mississippi in late May and early June 1864, emphasized the importance of information from deserters and refugees for intelligence purposes.

Deserters, refugees, and other persons coming in at any military post...will be carefully examined by a descreet (sic) officer, and the information obtained from them compared and collated with that derived from scouts and other sources, and reported direct to the Chief Signal Officer... Where this information is of immediate interest to any other commander, a copy of the report will be sent direct to that commander. (31)

This information was forwarded every six days unless the information was of critical importance which necessitated it to be forwarded immediately. These messages were sent in code to preclude enemy interpretation of the data. (32)

None of these sources of intelligence belonged to an "intelligence organization", but there was an established process to insure the flow of information to operational commanders. Information of importance was transmitted routinely as established by the signal corps. Signal troops intercepted each others messages from vantage points -- an easy technique for gathering intelligence. This open method of collection, versus the more covert aspect of interpreting cipher messages transmitted by wire, did produce ample information. (33)

At times when opposing signal stations were in view of one another, intelligence officers must have received five or ten enemy messages to every espionage or scouting report... Interception and decipherment of enemy messages remained only a secondary duty, often self-assigned, of the men who sent and received the field messages of their own armies. (34)

The importance of the signal corps and its soldiers to intelligence collection, analysis, transmission, and use is perhaps under-emphasized in the total contribution made to the Union Army. There was the beginning of an intelligence organization in the modern day sense -- it was the signal corps.

Another source of intelligence to both armies in the wide spectrum of sources available was the spy. Use of a common language, similar cultural backgrounds and traditions aided in the free movement of individuals seeking information of military value. It was common for a resident of the north to visit Confederate-held territory and vice versa. Excuses were easy to come by in the turmoil of war and provided a spy with the "cover" or plausible reason to move within enemy territory. Looking for displaced family members or simply business travel was ample rationale for movement. Most of the information collected from these spies was of moderate use, but as one account of the successes revealed "even with all these conditions in its favor and with many espionage successes revealed clearly in the records, Civil War spies did not provide a high proportion of important intelligence." (35)

Successes gained by spying may not have won the war, but the contributions added to the total intelligence collection efforts. Grant's head

spymaster, Col Sharpe, was working with the superintendent of the Richmond, Fredericksburg and Potomac Railroad for information on Confederate railroad activities. Samuel Ruth was responsible for keeping Confederate forces supplied by railroad and was essential to the South's efforts. By 1864, Ruth was also essential to Sharpe's efforts in detailing the condition of rail lines, strength of Confederate guard forces along the railroad, and specific logistical data pertaining to shipment of supplies. Additionally, Sharpe received input from Ruth on rebel locations and strengths in southwestern Virginia and North Carolina which supported Union actions in the areas during December 1864. (36)

Ruth's greatest contribution to Grant's efforts came in late February 1865, after his release from a Confederate jail in Castle Thunder, Virginia, where he had been held on suspicion of aiding Union forces. Ruth was sought out by a Confederate quartermaster to assist in moving a substantial amount of tobacco to trade for bacon being smuggled from the North. Ruth passed this information to Sharpe and a Union raid on the railroad depot near Fredericksburg on March 5, 1865, netted the capture of 400,000 pounds of tobacco and 400 prisoners, and the destruction of the depot. 28

freight cars, and four main railroad bridges south of Fredericksburg. (37)

Another major contributor to Grant's efforts was Elizabeth Van Lew. Miss Lizzie -- as she was commonly called -- came from a prominent Richmond family, but disagreed with the Confederate position on slavery and war in general. She assisted Union forces in whatever way she could and, along with her mother, provided food, clothing, and medical assistance to Union prisoners of war in the local prisons. Information that she gained about Confederate activities from these prisoners was passed to Union contacts who were covertly operating in Richmond. She used her own family servants to carry messages to these contacts. (38)

Over time, Miss Lizzie used her own behavior as a mask for her spying activities. Although she was regarded as a bit odd, her nickname of "crazy Bet" was far from accurate. She turned a former liberated slave into a servant for none other than Jefferson Davis, the Confederate President. (39) The information she gained from this slave was of obvious use to the Union efforts. Her web of unwitting sources included personnel of Confederate prisons such as Lieutenant David W. Todd, half-brother of President Lincoln's wife, who was the Commandant of Libby Prison in Richmond. She even succeeded in moving Todd's

successor and his family into her home as boarders. (40)

She also had sources in the Confederate War and Navy Departments and by war's end had built a courier system for her information consisting of five relay stations. Grant visited Van Lew's home upon entering Richmond during this final campaign to show his gratitude for her services. He noted her contributions in a written comment stating "You have sent me the most valuable information received from Richmond during the war." (41) While the specifics of the information she passed is not recorded, Sharpe characterized her activities as significant to Grant's efforts during the 1864-1865 campaign. (42)

Scouts were also major contributors to the overall Union intelligence collection effort. Scouts were not always in uniform and would, if possible, penetrate enemy lines and talk to unsuspecting soldiers. These scouts were used for terrain analysis, map updates, and fixing sites of enemy positions along with their intelligence collection roles. (43)

Major General P. H. Sheridan, Commander of Cavalry Corps under General Meade, used scouts dressed as Confederate soldiers to collect intelligence. These special troops were daring and used disguises to make their way past rebel pickets and strongholds. One

account of their activities demonstrates just how far they took their efforts.

...Sheridan wanted the boss; so one of his scouts, dressed like a Confederate Colonel, took a note which Sheridan scribbled on tissue paper, folded the tissue paper in tin foil, concealed that in a wad of leaf tobacco, and shoved the tobacco in his mouth - after which he went trotting off cross country to find U.S. Grant. (44)

The information obtained from spies and scouts provided essential data on the activity of enemy forces, but these sources were not the only means of acquiring intelligence. Less daring and sophisticated methods were employed on both sides of the battlefield for the collection of intelligence.

Debriefing and interrogation of deserters and prisoners also provided valuable information. This method of intelligence collection provided information as productive as scout's reconnaissance and other open methods of collection and perhaps even more effective than operations involving spies. (45) Deserters provided a wealth of information to the Union cause. The accounts of enemy force dispositions obtained from deserters appear frequently in messages among Grant, his chief of staff, and commanders. The reporting of this type of information through messages became the norm throughout the campaign and served to keep all levels of command informed on unconfirmed, yet usable information. This process of reporting also worked in

reverse as a tasking mechanism to gain information from deserters. (46)

A standing requirement for information from the debriefings of deserters was the locations of rebel forces. For example, Grant asked Meade for enemy information in a telegraph message of July 18, 1864: "Have you had any deserters from Hill's Corps in the last 24 hours." Information from deserters matched with reports in newspapers, from informants, or sightings from signal troops added to the process necessary to accept or refute the information. (47)

REPORTING AND ANALYSIS

Information from the field came into Grant and his subordinate commander's headquarters by telegraph, letters, face-to-face discussions between commanders, and through visual sightings of his staff. A member of Meade's staff, Colonel Theodore Lyman, related in a letter to his wife how he and other orderlies were dispatched to adjacent units to collect intelligence of on-going events. Information gained was reported back to Meade via telegraph or by return of the orderlies for an oral presentation. This process kept Meade and the ever nearby Grant informed of events in a timely manner. (48)

Generals were also viable intelligence collectors and reported their findings in messages and briefings to Grant. These messages reported friendly force activities, and often projections of enemy activities. A message from Meade to Grant on June 20, 1864, illustrates this type of reporting:

No reports indicating anything but quiet along the line have been this morning received...Your attention was called last evening to the reported position of Genl. Hunter ten miles South West of Lynchburg[.] This renders the probability of his reaching the White House very remote...I have reason to believe from prisoners & contrabands that Beauregard has been re-inforced (sic) by 2 divisions of Hill['s] corps[.] Wilcox's & Anderson['s] and possibly others...The enemy line is continued as far beyond my left flank as I have been able to reconnoitre, and they are busily occupied strengthening it...I do not propose making any movements today. (49)

Another example of the receipt and analysis of intelligence by general officers is offered in a message from Grant to his chief-of-staff, General Halleck, on July 4, 1864. The message revealed information obtained from a deserter concerning Confederate General Ewell's Corps intending to make its way towards Maryland and Washington. Grant directed forces to hold in Maryland to respond if required, but acknowledged the report may be in error. A message the next day from Major General Benjamin F. Butler to Grant continued the reporting and analysis of information concerning Ewell's movements. Butler indicated that

the enemy forces were those of Early's, not Ewell's, and the forces were invading Maryland in route to Washington which was without adequate forces to protect it. (50)

On the 6th of July, reporting of enemy activity continued. Halleck's analysis of the situation put enemy strengths between 7,000 to 20,000. Contradictory reporting put Confederate strengths at closer to 30,000 and concluded the forces had to be Ewell's. (51) This example of the confusion during battle and the reporting of events from numerous sources indicates the problems of analysis of intelligence is not unique to the twentieth century.

The compilation of reports on enemy activities had to make an impact on Union force activities. Meade describes how this information was recorded and later studied in a message to Grant on September 17, 1864:

...Yesterday I informed you Signal officers North of the appomatox (sic) reported the movement into Petersburg of troops...and a deserter stated he had about the same time seen troops marching through Petersburg (sic)... There may be nothing in all this, but (s)o many reports from different sources would lead to the conclusion that some movement is on feet. Whether it be offensive, or whether it is that seeing in our journals the reports of large accessions daily received by this Army Lee is merely preparing for an anticipated extension of our lines I am unable to say, but the existence of these reports & the movements known have combined to produce caution... (emphasis added) (52)

The fact that Grant was receiving daily reports of enemy activities comes as no surprise. The degree of analysis that went into these reports does indicate the importance to Grant and his commanders of having current information on the enemy. This information aided Grant in projecting enemy movements and was not coincidental to his eventual success.

A review of reports and messages that flowed among Grant's headquarters reveals the existence of a framework for reporting intelligence and assessments of known activity. Opening lines of most messages contained a simple statement of "...I have nothing important to report" or "I have nothing new to report for yesterday or today." The counter to this statement was the immediate discussion of pertinent enemy activity so that facts of impending enemy activity were reported immediately to the user. (53) Where this format or style of reporting originated has not been determined, but Grant used this same method of reporting in his own messages to higher headquarters and to subordinate commanders.

The existence of an indepth analytical effort within Grant's headquarters is further supported through the review of a memo prepared by Colonel Sharpe, Grant's head spymaster, for Secretary of War Stanton. The memo contains a 24 hour summary of

intelligence and reveals the level of detail Grant had available to him. This memo details enemy dispositions, strengths, and capabilities across the battlefield. Detailed reports on railroads are included which summarized train schedules, routes followed, and status of bridge repairs. Information on enemy officer promotions, their unit of assignment and subordination completed this rather detailed and informative report. (54) The absence of a national level intelligence organization for the Union Army may be true. However, Sharpe's efforts essentially filled the void of a centralized, national level, intelligence agency and gave the direction and analysis necessary to formulate an intelligence assessment of enemy activities.

The analysis of information described above included more than just enemy strengths and dispositions. The analysis of the terrain could aid in determining future enemy's actions. (55) As Grant prepared to set off to the Wilderness he began preparing maps of the area in which he was to fight. A letter written by Colonel Lyman on May 31, 1864, indicates the information posted on maps for Grant was not very accurate. Engineers had compiled information from many sources to include local maps and inhabitants

of the area. Unfortunately, this data often had cities mislocated by several miles and roads running in the wrong places. To rectify these problems engineers were sent in advance of the armies and on the flanks to measure distances and to record what they saw. These sketches were then photographed when possible and disseminated to major commanders who in turn provided updates from their engineers and those who traveled with the cavalry. (56)

Prior to movement, Grant directed terrain reconnaissance of an intended route towards Spotsylvania by Major General A. E. Burnside, Commander of Ninth Army Corps. His use of reconnaissance forces to gather information upon which to make or adjust his plans was particularly noteworthy. The reconnaissance of the intended route of attack revealed, "the ground entirely impracticable to pass troops over. The attack therefore will not be made as ordered." (57)

The ability of Grant and his staff to analyze the intelligence obtained became key to the success of the Union Army. The use of multiple sources of information provided input on enemy capabilities, current actions, and the impact of the terrain on battle planning. The fact that no formal intelligence organization existed to orchestrate the collection and subsequent analysis

of the information was overcome through the efforts of Grant, his commanders, and members of their staffs.

SECTION III

INTELLIGENCE AND THE CAMPAIGN

Grant's final campaign plan was etched in his mind, but the intelligence preparation he conducted and constantly directed was instrumental to this final plan. The flow of information coming into Grant at his headquarters caused him to direct specific actions for verification of information that could impact on his plan. On April 26, 1864, Halleck informed Grant of a "spy" sighting Longstreet's baggage in Richmond and his artillery at Lynchburg. Other reports of thousands of men from North Carolina being sent to reinforce Lee prompted Grant to send out scouts to verify the accuracy of the reporting. Grant's concern was the possibility of Confederate movement into the Shenandoah Valley which could oppose Union forces moving in that direction. (58)

As preparations for the Battle of the Wilderness began, the movement order published by General Meade to the Army of the Potomac contained instructions for the passing of intelligence gained on the enemy to his headquarters and to the commanders of the corps and divisions of infantry troops. (59) As the Army of the

Potomac moved on 3 and 4 May, its movement was reported by Confederate forces. A signal station on Clark's Mountain reported by "flag signal" the movement of Union Cavalry forces. This message was intercepted and translated by Union signal personnel nearby and subsequently passed to Grant in the field. Grant accepted this information with vigor and reacted by stating "That gives me just the information I wanted. It shows that Lee is drawing out of his position and is pushing to meet us." (60)

This comment implies Grant expected Lee to move, but the facts surrounding this message require further interpretation. It appears the message given to Grant was hours old and contained no mention of Lee moving. Subsequent messages intercepted added little to the original message. Indications of Confederate forces moving is not reflected until late that same afternoon which adds further questions to the validity of Grant's statement. However, based on this information, orders for 5 May were rewritten to modify the original plans. (61)

The Battle of the Wilderness left both Grant and Lee with no real advantage over the other. Grant's attempt to destroy Lee's forces met with failure. Lee thought his forces had hurt the Union cause to the

point Grant would retreat. Lee placed forces at Spotsylvania "to fall on Grant's retreating columns in case the latter made an attempt at a backward movement." (62)

Grant, on the other hand, wanted to keep Lee at his front so Union forces could lay siege to Richmond and destroy the railroads which were key to Southern efforts. Neither general seemed to know where the other was until the armies met again at Spotsylvania. (63) On 9 May, Grant directed General Meade to "send out scouts at once...to discover if there is any considerable movement of force...Should there prove to be it would become necessary to recall the troops and push the enemys (sic) left flank vigerously (sic)." (64) Grant asked for information while simultaneously establishing an action to be taken if the answer was positive. This simple process of tasking a commander for information while directing action if the information was obtained, insured quick responses to battlefield intelligence. The process was not sophisticated, but it worked.

This means of communicating intelligence requirements while simultaneously adjusting forces to take action demonstrates unique operational capabilities by Grant. His use of intelligence in the campaign also fits the spirit of today's definition of

the operational level of war intelligence as contained in FM 34-25, Corps Intelligence and Electronic Warfare

Operations:

The echelon focus of the operational level is situationally dependent, reflecting the nature of the theater of war itself, the political and military objectives of the combatants, and the types of military forces which can be employed. While the planning considerations of the tactical commander are principally military in nature, the campaign planning considerations of the national level commander incorporates political, economic, psychological, geographical, and military factors. (65)

Grant's planning factors broached both the tactical and operational levels of warfare. He directed his commanders in battle tactics, but simultaneously considered the national level impacts of the warfighting on the outcome of the campaign plan he had developed. The political aspects of completing the campaign before the elections was ever present in his mind. He studied the enemy and knew the importance of the railroad to Lee's efforts. The geographical importance of Richmond to the Confederate efforts became Grant's focus of attention in breaking the will of the South to continue fighting. These factors came clear in a letter Grant wrote to his chief-of-staff in early June 1864.

My idea from the start has been to beat Lee's Army, if possible, North of Richmond, then after destroying his lines of communication North of the James river to transfer the Army to the

South side and besige (sic) Lee in Richmond, or follow him South if he should retreat. I now find after more than thirty days of trial that the enemy deems it of the first importance to run no risks with the Armies they now have. They act purely on the defensive, behind breast works, or febly (sic) on the offensive immediately in front of them and where, in case of repulse, they can instantly retire behind them. (66)

Grant's interest and knowledge of battle tactics across the battlefield demonstrated his analytical thoughts in identifying how the enemy fought. He analyzed what was provided to him and reached conclusions about the enemy. A letter to Sherman portrays the manner in which his reasoning unfolded analytically:

Deserters in to-day (sic) shew (sic) that Gordon[']s & Pegram's Divisions left early...We have deserters from Terry's Brigade of Gordon's Division. This only leaves Rhodes['] & Wharton[']s Divisions with the Cavalry in the Valley. If the weather holds favorable you can now make a successfull (sic) offensive campaign. Try it if you can. (67)

By early September 1864, Atlanta had fallen, which accomplished Grant's first step in defeating Lee. More battles were to come and the need for intelligence continued. During the Shenandoah Valley campaign, Grant planned to drive Early's Second Army Corps out of the valley. The advantage to Grant, if this action was successful, would be the denial of Lee's sources of supply from this area. Grant gave the mission to

Sheridan and initial successes in late September 1864, were substantial. Sheridan had impacted heavily on Lee's supply by taking everything he could and destroying the rest to deny the use of the area to Confederate forces in the future. (68)

By early October 1864, Sheridan moved back out of the valley again taking or destroying supplies as he moved. The advantage was clearly with Sheridan so Grant now ordered him to stop and take aim at both the James River Canal and the Virginia Central Railroad. This action would either cause Early's beaten forces to withdraw or take up a stance to hold further Union actions in abeyance which effectively kept Early from doing anything that impacted on Union efforts. The critical bit of information of enemy intentions then falls into place. An intercepted message from Longstreet to Early provided details of Confederate intent. The message directed Early to prepare to move against Sheridan along with Longstreet's forces. Using this information, Sheridan moved to join Brigadier General H. G. Wright's First Division at Cedar Creek, south of Winchester, Virginia. (69)

On 18 October, Early moved and made it into the rear of the left flank of Sheridan's forces. Early's forces were turned back over the next several days. Without the intercepted information detailing Early's

movements, the outcome of the campaign through the Shenandoah Valley may have been different. (70) The collection, analysis, and transmittal of intelligence to commanders was key to the successes of the Union Army and Grant's final campaign.

By the end of March 1865, Grant was poised to make his final campaign with the Army of the Potomac. At Five Forks, Virginia, Confederate forces were again soundly defeated, which denied Lee yet another "avenue of escape." Petersburg had to be evacuated and with it Richmond and the Confederacy were lost. On April 9, 1865, Grant received the surrender of Lee at Appomattox, Virginia and the great campaign was ended. (71)

SECTION IV

CONCLUSIONS

Grant's final campaign to end the Civil War began with the movement of the Army of the Potomac through the wilderness towards Richmond. Meade's movement order for the Army contained instructions for the passage of intelligence to commanders to insure the latest information pertaining to the enemy was available for decision making. Information obtained from prisoners, deserters, signal site observations and

interceptions, newspapers, staff reports, scouts, pickets, and informants was forwarded by telegraph to commanders. Grant, upon receiving these reports, would in turn send related information to the appropriate commander and often would include operational guidance on how to react to enemy actions. Key enemy actions and the counteractions taken by Union forces were then summarized by Grant and forwarded via cipher message to his chief-of-staff in Washington to keep Secretary of War Stanton and the President informed.

The availability of the telegraph to forward these reports of intelligence to commanders needing the information was key to the success of the Union Army. Without this communication link, information would have arrived late and delayed timely action. Grant used the telegraph to receive and transmit intelligence necessary to direct his campaign. His needs for information were specific and concise which saved time in transmission. The messages he received from subordinate commanders contained relevant enemy information in the opening lines which satisfied many of his intelligence needs. His own operational "vision" which allowed him to project the next battle was also instrumental in shaping the intelligence collection process to provide him with the intelligence he needed.

Grant did not inherit an organized and established "intelligence service" or "secret service" because none existed in the Civil War. However, the absence of an established intelligence service was overcome through the efforts of many dedicated personnel who orchestrated the flow of intelligence into and out of Grant's headquarters. One of those dedicated persons was Colonel George H. Sharpe. His knowledge of the Bureau of Military Information, from his service with the Army of the Potomac, was used to build an intelligence system which served Grant and the Union Army in this final campaign to end the war. Sharpe's influence on Grant is not documented, but his role as the Union Army's chief spymaster is. The information Sharpe collected through the likes of Samuel Ruth and Elizabeth Van Lew was essential to Grant's cause.

The absence of a national intelligence organization to process the information gathered did not hinder the efforts of Grant or the Union Army. The Signal Corps performed the mission for them. The Signal Corps' internal policies and directives specifying how information was to be collected and reported effectively breached the gap that existed and provided the means to collect and transmit essential intelligence.

Grant's own "art of war" necessitated knowing where the enemy was so he could engage him. This laid the foundation for collection of intelligence. Knowledge of the terrain over which the Union Armies would operate was also important to Grant. As noted, battles were canceled because of reports from terrain reconnaissance that revealed the area was unsuited for the movement of supplies and troops.

Grant also demonstrated the necessity to analyze intelligence to project future events. The use of unconfirmed information matched with confirmed intelligence provided the basis for reaching conclusions on Confederate activities. This allowed Grant and his commanders to anticipate enemy actions and use intelligence sources to confirm or deny their existence.

Grant demonstrated an effective process of intelligence collection and analysis that utilized the integration of intelligence collected from sources other than pure "intelligence" collectors. Grant collected intelligence as did his commanders, staffs, and others in contact with the enemy. Intelligence collection is not limited to only those assets controlled by an intelligence agency. Everyone can contribute. However, the required intelligence may not be collected unless commanders are specific about their

intelligence needs. Grant told his commanders what he needed and what to do operationally when the intelligence confirmed his plans. Intelligence requirements were specific and kept less important information from overburdening the intelligence analysis process. This lesson should not be overlooked today.

A second lesson Grant demonstrated was the use of communication to get intelligence to the user in a timely manner. Communication links have to be established to provide commanders with a means to receive this intelligence and allow for battle management simultaneously. Grant demonstrated the effectiveness of intelligence on battle outcome when it is received in a timely manner. The sophistication of warfare with the advent of modern technology has changed warfighting. This same technology needs to be used to solve problems associated with intelligence dissemination that continue to plague armies today.

Lastly, the analytical effort--the bread and butter of intelligence production--has to support the commander's battle plan. If intelligence analysts do not know or understand what the commander desires to do operationally, their analysis may focus on the wrong issues. Consequently, intelligence

requirements will not be directed to answer the commander's needs nor will the resulting analysis support the commander's decision making process. The results could be disastrous.

Grant demonstrated an understanding of the relationship between operational planning, intelligence collection, and analysis. Unfortunately, this connectivity does not always occur. These factors are currently in review as a result of Operation Desert Storm. Grant recognized the importance of operational planning and the need for intelligence in making the overall campaign a success. These factors can not be overlooked in future battles. Measures must be taken to insure intelligence is properly collected, analyzed and disseminated to insure success in a manner Grant demonstrated as an operational planner and warfighter. His observations and actions are still valid today and are worthy of review as we move into the twenty-first century.

ENDNOTES

1. James M. Dubik, Grant's Final Campaign: A Study In Operational Art, (Ft. Leavenworth: School Of Advanced Military Studies, October 1991), p. 35.
2. Horace Green, General Grant's Last Stand: A Biography, (New York: Charles Scribner's Sons, 1936), pp. 12-18.
3. Hamlin Garland, Ulysses S. Grant: His Life and Character, (New York: Doubleday & McClure Co., 1898), pp. 288-290.
4. Michael Howard & Peter Paret, editor and translator, Carl von Clausewitz: On War, (Princeton, New Jersey: Princeton University Press, 1976), p. 117.
5. J.F.C. Fuller, Grant and Lee: A Study in Personality and Generalship, (Bloomington: Indiana University Press, 1982), pp. 74-88.
6. William C. Church, Ulysses S. Grant and The Period of National Preservation and Reconstruction, (New York: G. P. Putman's Sons, 1897), p. 227.
7. William S. McFreely, Grant, A Biography, (New York: W. W. Norton and Co., 1981), pp. 102-103.
8. Robert Garth Scott, Into The Wilderness With The Army of The Potomac, (Bloomington: Indiana University Press, 1985), p. 9.
9. Time-Life Books, The Civil War, Spies, Scouts, And Raiders: Irregular Operations, (Alexandria, Virginia: Time-Life Books, Inc., 1985), p. 72.
10. Ibid, p. 10.
11. John T. Hubbell, editor, Battles Lost and Won: Essays From Civil War History: The Mythology of Civil War Intelligence, by Edwin C. Fishel, (Westport, Connecticut: Greenwood Press, 1975), pp. 83-84.
12. Victor M. Rosello Jr., The Origins of Operational Intelligence, (Ft. Leavenworth, KS: School Of Advanced Military Studies, May 1989), p. 36.
13. Hubbell, Battles Lost, pp. 83-84.

14. Harnett T. Kane, Spies for the Blue and Gray, (Garden City, NY: Hanover House, 1954), p. 11.
15. Ibid.
16. Ibid, p. 126.
17. Ibid.
18. Bruce W. Bidwell, History of the Military Intelligence Division, Department of the Army General Staff: 1775-1941, (Frederick, MD: University Publications of America, Inc., 1986), p. 39. Sharpe's organization is referred to as the Bureau Information vice Bureau of Military Information. Regardless of the name, it was the first true intelligence organization within Grant's headquarters.
19. Hubbell, Battles Lost, pp. 95-96.
20. Bidwell, History of the Military Intelligence Division, pp. 31-32.
21. Mary Drake McFreely and William S. McFreely, selected letters and notes, Ulysses S. Grant: Memoirs and Selected Letters, New York: Literary Classics of the United States, Inc., 1990) pp. 534-535.
22. William R. Plum, The Military Telegraph During The Civil War In The United States, (Chicago: Jansen, McClung and Company, 1882), pp. 141-142.
23. Edward Steers, The Wilderness Campaign, (Harrisburg: The Stackpole Co., 1960), p. 18.
24. Plum, The Military Telegraph, p. 202.
25. McFreely & McFreely, Ulysses S. Grant: Memoirs, pp. 802-803.
26. Ibid, p. 536.
27. J. Willard Brown, The Signal Corps, U.S.A. In The War of The Rebellion, (Boston: U.S. Veteran Signal Corps Association, 1896), pp. 125-129.
28. Ibid.
29. Ibid, p. 133.
30. Ibid.

31. Ibid, p. 594.
32. Ibid, p. 595.
33. Hubbell, Battles, pp. 102-103.
34. Ibid, p. 102.
35. Hubbell, Battles Lost and Won, pp. 100-101.
36. Time-Life Books, The Civil War, Spies, pp. 80-86.
37. Ibid, p. 36.
38. Kane, Spies For The Blue and Gray, pp. 231-239.
39. Ibid.
40. Time-Life Books, The Civil War, Spies, p. 83.
41. Ibid, p. 89.
42. Kane, Spies, p. 247.
43. Hubbell, Battles, pp. 102-105.
44. Bruce Catton, The Army of the Potomac: Stillness At Appomattox, (Garden City, NY: Double Day & Co., Inc., 1953), p. 386.
45. Hubbell, Battles, p. 105.
46. John Y. Simon, editor, The Papers of Ulysses S. Grant, Volume 11: June 1-August 15, 1864, (Carbondale, ILL: Southern Illinois University Press, 1984), pp. 237, 245, 256, 275, 277, 291, 317, 387. These pages all contain messages reflecting opening statements regarding enemy activities or the lack of information on the enemy. This informal format appears to have become the norm for passing intelligence within telegraph messages.
47. Ibid, p. 277.
48. George R. Agassiz, editor, Meade's Headquarters 1863-1865: Letters of Colonel Theodore Lyman from The Wilderness to Appomattox, (Boston: The Atlantic Monthly Press, 1922), pp. 111-127.

49. Simon, The Papers of Ulysses S. Grant, Vol 11,
p. 95.
50. Ibid, pp. 169-172.
51. Ibid, pp. 176-178.
52. Simon, editor, The Papers of Ulysses S. Grant.
Volume 12: August 16-November 15, 1864,
(Carbondale, ILL: Southern Illinois University Press,
1984), pp. 169-170.
53. Ibid, pp. 139, 140, 176.
54. Ibid, pp. 437-438.
55. Paddy Griffith, Battle Tactics of The Civil War,
(New Haven: Yale University Press, 1989), p. 68.
56. Agassiz, Meade's Headquarters, pp. 136-137.
57. Simon, The Papers of Ulysses S. Grant, Volume 10,
p. 460.
58. Ibid, p. 362.
59. Scott, Into The Wilderness, pp. 202-203.
60. Steers, The Wilderness Campaign, p. 57.
61. Ibid.
62. J. H. Stine, History of The Army of The Potomac,
(Washington, D. C.: Gibson Bros., Printers and
Bookbinders, 1893), p. 613.
63. Ibid, p. 614.
64. Simon, The Papers of Ulysses S. Grant, Volume 10,
p. 418.
65. U.S. Army, FM 34-25, Corps Intelligence And
Electronic Warfare Operations, (Washington:
Department of the Army, 1987), p. 2-10.
66. Simon, The Papers of Ulysses S. Grant, Volume 11,
p. 19.
67. Simon, The Papers Of Ulysses S. Grant, Volume 13,
p. 95.

68. McFreely & McFreely. Ulysses S. Grant: Memoirs, pp. 620-628.
69. Ibid.
70. Ibid.
71. Green, General Grant's Last Stand, pp. 196-213.

BIBLIOGRAPHY

BOOKS

- Agassiz, George R. (editor). Meade's Headquarters 1863-1865: Letters of Colonel Theodore Lyman From The Wilderness to Appomattox. Boston, Mass: The Atlantic Monthly Press, 1922.
- Bidwell, Bruce W. History of the Military Intelligence Division, Department of the Army General Staff: 1775-1941. Frederick, Md: University Publications of America, Inc., 1986.
- Brown, J. Willard. The Signal Corps, U.S.A. In The War of The Rebellion. Boston, Mass: U.S. Veteran Signal Corps Association, 1896.
- Burne, Alfred H. Lee, Grant and Sherman: A Study in Leadership in the 1864-1865 Campaign. Aldershot, Great Britian: Gale and Polden, Limited, 1938.
- Catton, Bruce. The Army of the Potomac: A Stillness at Appomattox. Garden City, New York: Double Day and Co., Inc., 1953.
- Church, William C. Ulysses S. Grant and The Period of National Preservation and Reconstruction. New York: G. P. Putnam's Sons, 1897.
- Clausewitz, Carl von. On War. Michael Howard and Peter Paret (editors and translators). Princeton, New Jersey: Princeton University Press, 1976.
- Fuller, J.F.C. Decisive Battles of The U.S.A. New York: Thomas Yoseloff, Inc., 1942.
- Fuller, J.F.C. Grant and Lee: A Study In Personality and Generalship. Bloomington, Indiana: Indiana University Press, 1982.
- Furse, George Armand, Information In War: Its Acquisition and Transmission. London: William Clowes & Sons, Limited, 1895.
- Garland, Hamlin. Ulysses S. Grant: His Life and Character. New York: Doubleday and McClure Co., 1898.
- Geer, Walter. Campaigns Of The Civil War. New York: Brentano's, 1926.

- Green, Horace. General Grant's Last Stand: A Biography. New York: Charles Scribner's Sons, 1936.
- Griffith, Paddy. Battle Tactics of The Civil War. New Haven, Conn: Yale University Press, 1989.
- Hagerman, Edward. The American Civil War And The Origins Of Modern Warfare: Ideas, Organization, and Field Command. Bloomington, Indiana: Indiana University Press, 1988.
- Handel, Michael I. War, Strategy and Intelligence. Totowa, N.J.: Frank Cass and Co. Limited, 1989.
- Hattaway, Herman and Jones, Archer. How the North Won: A Military History of the Civil War. Urbana and Chicago: University of Illinois Press, 1991.
- Howland, Edward. Grant As A Soldier and Statesman: Being A Succinct History of His Military and Civil Career. Hartford: J. B. Burr and Co., 1868.
- Hubbell, John T. Battles Lost and Won: Essays from Civil War History. West Port, CT.: Greenwind Press, 1975. The Mythology of Civil War Intelligence, by Edwin C. Fishel.
- Kane, Harnett T. Spies for the Blue and Gray. Garden City, N.Y.: Hanover House, 1954.
- Mays, Joe H. Black Americans And Their Contributions Toward Union Victory In The American Civil War, 1861-1865. Middle Tennessee State University, 1983.
- McConnell, Thomas G. Conversations With General Grant. Annandale, VA: Walnut Hill Publishing Company, 1990.
- McFreely, Mary Drake and McFreely, William S., selected letters and notes, Ulysses S. Grant: Memoirs and Selected Letters. New York: Literary Classics of the United States, Inc., 1990.
- McFreely, William S. Grant, A Biography. NY, London: W. W. Norton and Co., 1981.
- McFreely, William S. Memoirs of General William T. Sherman. New York: Da Capo Press, Inc, 1984.

- McPherson, James M. Battle Cry of Freedom: The Civil War Era. New York: Oxford University Press, Inc., 1988.
- Meneely, A. Howard. The War Department, 1861: A Study In Mobilization and Administration. New York: Columbia University Press, 1928.
- Plum, William R. The Military Telegraph During The Civil War In The United States. Chicago: Jansen, McClung and Co., Publishers, 1882.
- Scott, Robert Garth. Into The Wilderness With The Army Of The Potomac. Bloomington: Indiana University Press, 1985.
- Simon, John Y. The Papers of Ulysses S. Grant, Vol 10: January 1-May 31, 1864. Carbondale, Ill: Southern Illinois University Press, 1984.
- Simon, John Y. The Papers of Ulysses S. Grant, Vol 11: June 1-Aug 15, 1864. Carbondale, Ill: Southern Illinois University Press, 1984.
- Simon, John Y. The Papers of Ulysses S. Grant, Vol 12: August 16-November 15, 1864. Carbondale, Ill: Southern Illinois University Press, 1984.
- Simon, John Y. The Papers of Ulysses S. Grant, Vol 13: November 16, 1864-February 20, 1865. Carbondale, ILL: Southern Illinois University Press, 1985.
- Simon, John Y. The Papers of Ulysses S. Grant, Vol 14: February 21-April 30, 1865. Carbondale, ILL: Southern University Press, 1985.
- Starr, Stephen Z. The Union Cavalry In The Civil War: Vol. II The War In The East From Gattysburg to Appomattox 1863-1865. Baton Rouge, LA: Louisiana State University Press, 1981.
- Steers, Edward. The Wilderness Campaign. Harrisburg, PA: The Stackpole Co., 1960.
- Stine, J.H. History of The Army of The Potomac. Wash, D.C.: Gibson Brothers, 1893.
- Sun-Tzu. The Art of War. Samuel E. Griffith (editor). Oxford: Oxford University Press, 1963.

Time-Life Books Editors. The Civil War, Spies, Scouts And Raiders: Irregular Operations. Alexandria, VA: Time-Life Books Inc., 1985.

Todd, Helen. A Man Named Grant. Boston, MA: Houghton Mifflin Co., 1940.

Weber, Ralph E. The Final Memoranda, Major General Ralph H. Van Deman, USA Ret. 1865-1952, Father of U.S. Military Intelligence. Wilmington, Del.: Scholarly Resources, Inc., 1988.

Weber, Ralph E. United States Diplomatic Codes and Ciphers, 1775-1938. Chicago: Precedent Publishing Inc., 1979.

GOVERNMENT MANUALS AND OTHER DOCUMENTS

Broome, Doyle D. Jr. Intelligence Operations of The Army Of The Cumberland During The Tullahoma And Chickamuga Campaigns. Ft. Leavenworth, KS: U.S. Army Command and General Staff College, 1989.

Dubik, James M. Grant's Final Campaign: A Study Of Operational Art. Ft. Leavenworth, KS: SAMS, 1991.

Field Manual 34-25. Corps Intelligence and Electronic Warfare Operations. Washington, D.C.: Headquarters, Department of the Army, September 1987.

Nettesheim, D.D. Topographical Intelligence And The American Civil War. Ft. Leavenworth, KS: U.S. Army Command and General Staff College, 1978.

Rosello, Victor M. Jr. The Origins Of Operational Intelligence. Ft. Leavenworth, KS: SAMS Monograph, 10 May, 1989.

Schneider, James J. Theoretical Paper No. 4: Vulcan's Anvil: The American Civil War and the Emergence of Operational Art. Ft. Leavenworth, KS: School of Advanced Military Studies, 16 June, 1991.

U.S. Army Intelligence Center and School, Supplemental Reading 02520, The Evolution of American Military Intelligence. Ft. Huachuca, AZ: May 1973.

U.S. War Department. The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies. Series I, Volume XXXVI. Washington, D.C.: U.S. Government Printing Office, 1891